

5.0 PUBLIC PAGE

A Comprehensive Update in the Evaluation of Pipeline Weld Defects

Summary

Girth weld defect acceptance criteria are set and enforced in all pipeline constructions per federal regulations (CFR 49 Parts 192 and 195). With the increased use of mechanized welding and AUT (Automated Ultrasonic Testing) in new pipeline constructions, alternative defect acceptance criteria based on ECA (Engineering Critical Assessment) principles are frequently used in lieu of the traditional workmanship criteria. This proposed program represents a major update to the alternative girth weld defect acceptance criteria. There are two focus areas in this program. The first focus area is to update the alternative defect acceptance criteria to address the immediate need of pipeline constructions in the U.S., typically with pipeline longitudinal strains less than 0.5%. The second focus area is the development of alternative defect acceptance criteria for ultrahigh strength pipelines (e.g., X100) in geotechnically challenging environments, such as arctic area and deep water offshore. These service environments will entail pipeline longitudinal strains greater than 0.5% and even up to 2-4%. No codified defect acceptance criteria yet exist for those service conditions. It is expected that the outcome of this project will form the basis for the revision of girth weld alternative acceptance criteria in North America, such as API 1104 Appendix and CSA Z662 Appendix K.

Progress as of December 2003

The first public meeting was held on November 5 2003 since the start of this project in September 2003. This public meeting was intended to

- Inform the industry the background of this work and the planned work scope,
- Solicit input from the industry on its view of the work scope, and
- Create a mechanism for the industry to provide input to the project.

The meeting was well attended by 25 representatives from oil and gas industry, PRCI, and DOT. There were a large of number constructive suggestions to enhance the positive impact of this project on the safety and reliability of nation's energy pipelines. The project team is fine-tuning the project plan based on these suggestions.